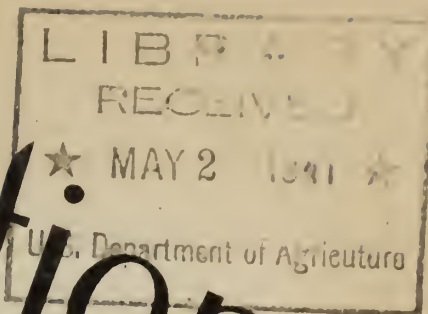


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Dairy Production



Issued Monthly by
AGRICULTURAL MARKETING SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

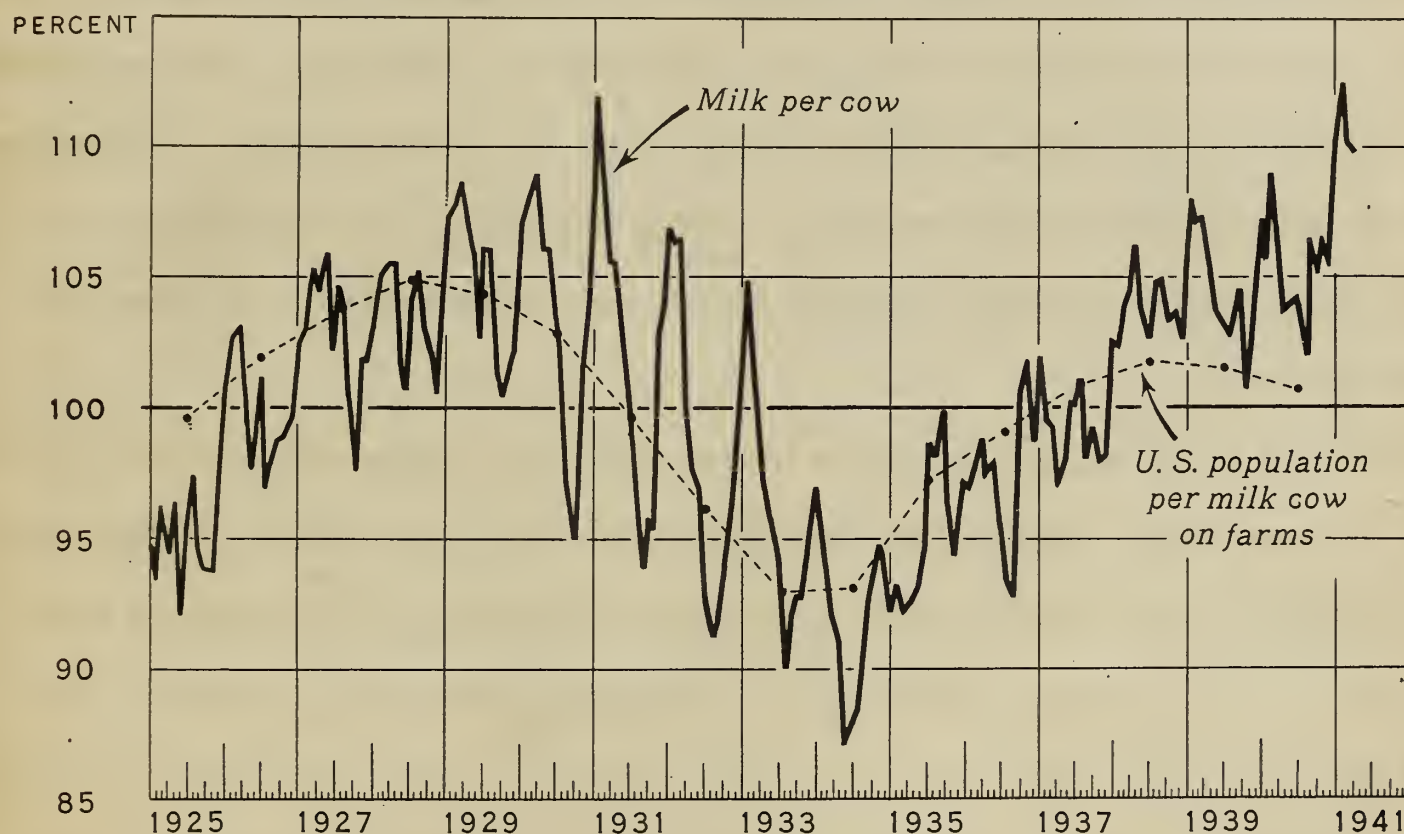
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AMS.

APRIL 15, 1941

MILK PRODUCTION PER COW AS A PERCENTAGE OF 1935-39 AVERAGE FOR SAME DATE, UNITED STATES, 1925-41

(AS INDICATED BY REPORTS FROM CROP CORRESPONDENTS ON FIRST OF EACH MONTH)



U. S. DEPARTMENT OF AGRICULTURE

NEG. 405 AGRICULTURAL MARKETING SERVICE

MILK PRODUCTION PER COW HAS SHOWN VARIOUS SIGNIFICANT DEPARTURES FROM THE AVERAGE SEASONAL TREND. MANY OF THE LARGER CHANGES MAY BE EXPLAINED BY THE RATE OF FEEDING AND THE CONDITION OF PASTURES BUT SOMETHING--APPARENTLY THE EFFECT OF PRODUCTION ON PRICES AND THEREFORE ON THE RATE OF FEEDING--HAS KEPT PULLING PRODUCTION PER COW BACK TOWARDS THEORETICAL REQUIREMENTS AS MEASURED BY THE NUMBER OF PEOPLE DEPENDENT ON EACH COW.

LATE WINTER PRODUCTION WAS HIGHER THAN USUAL RELATIVE TO SUMMER PRODUCTION FROM 1930 THROUGH 1933 AND THERE ARE INDICATIONS THAT A SIMILAR TENDENCY IS DEVELOPING NOW. THESE, AND OTHER FACTORS WHICH HAVE AFFECTED PRODUCTION IN CERTAIN PERIODS ARE EXPLAINED ON PAGES 6 AND 8.

DAIRY PRODUCTION SUMMARY

Production and disappearance of dairy products have continued outstandingly heavy. Milk production in March was about 3.6 percent above production in that month last year, and the increase in manufactured dairy products was about 7 percent. Production has probably continued heavy well into April, judging from the high production per cow on April 1, the high level of weekly butter production to April 10, and the remarkably mild weather during the first 2 weeks of April. Stocks of dairy products declined about the usual percentage during March and aggregate holdings on April 1 were average in comparison with current production.

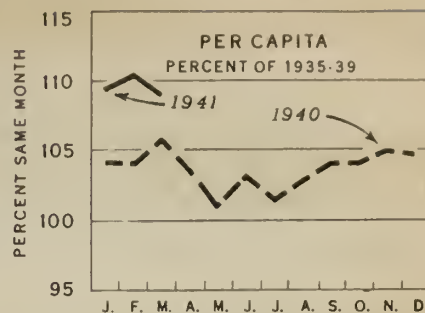
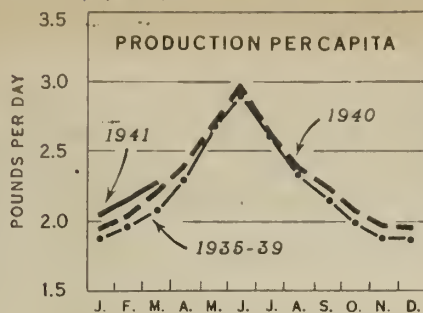
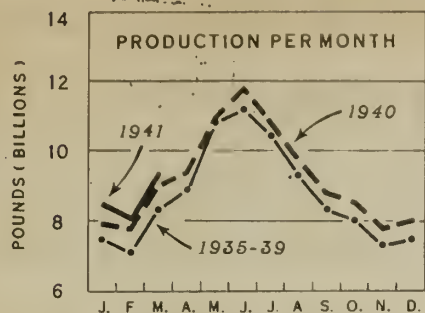
Conditions also favor heavy production for some months. The supply of feed grain on farms is slightly above the record holdings of a year ago. Hay reserves are also believed to be large. Prospects for crops and pastures are quite generally favorable. Prices of feed have been rising but high protein feeds are still relatively cheap and up to April 14 feed grains were only about up to prices at that time last year.

Prices of dairy products, on the other hand, have increased sharply. Butter is now 17 percent higher than a year ago and cheese 25 percent higher. The price of market milk has increased slightly instead of declining, as is usual at this time of year. On the whole, conditions in mid-April appear more favorable for liberal feeding of milk cows than at the same season in any of the last 10 years, except perhaps 1936. Until conditions change, the high rate of feeding and the increase in cows are likely to keep milk production close to or above previous high records for the season.

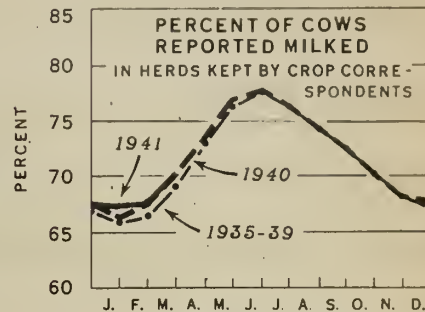
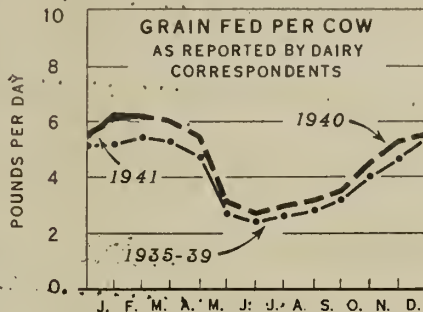
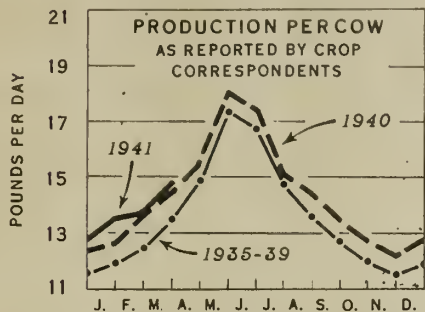
The supply of farm labor will be a factor in the situation. The supply about April 1 was reported much below normal from central Wisconsin and northern Illinois eastward through New England. The principal market milk areas, due to their location close to large cities appear to be affected more than most other farming sections.

DAIRY PRODUCTION: GRAPHIC SUMMARY FOR THE UNITED STATES

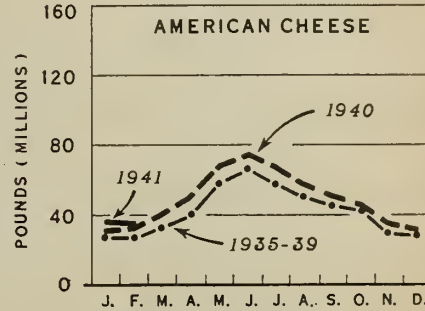
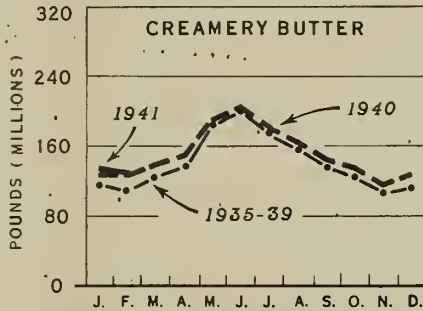
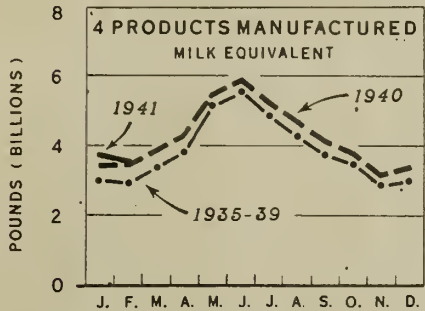
MILK PRODUCTION ON FARMS



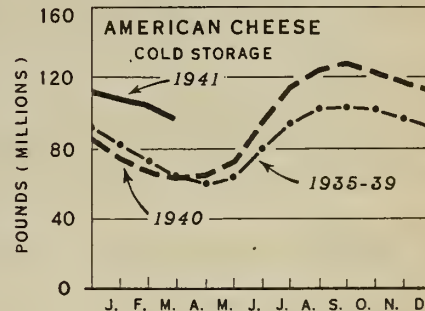
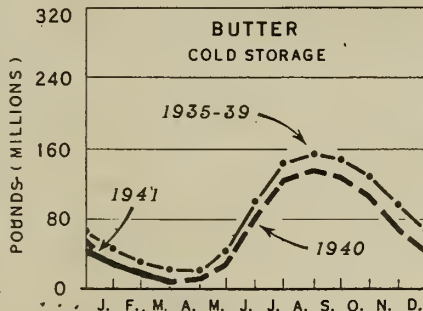
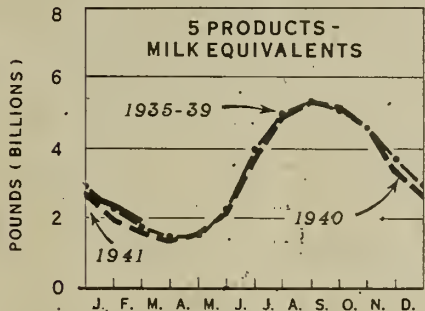
MILK PRODUCTION FACTORS



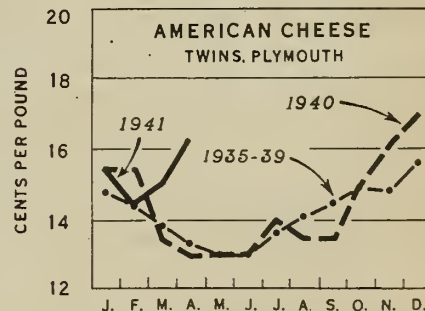
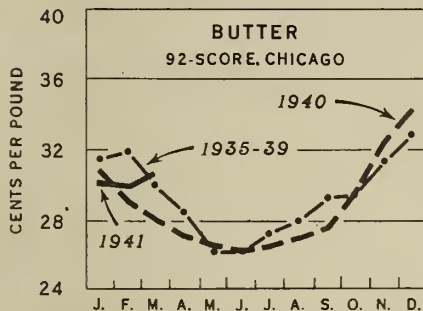
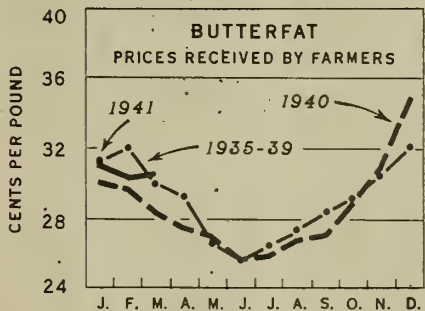
DAIRY PRODUCTS MANUFACTURED



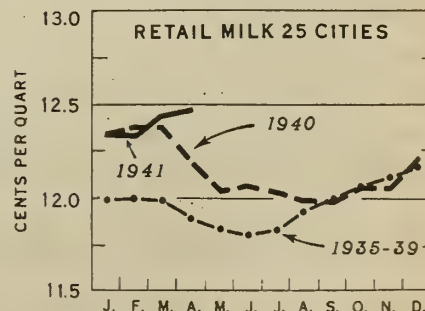
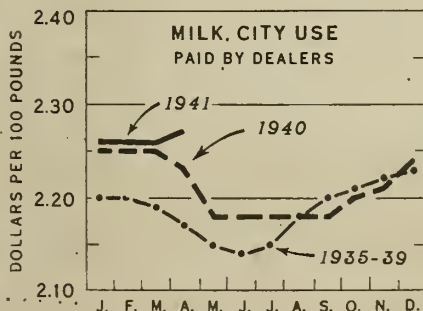
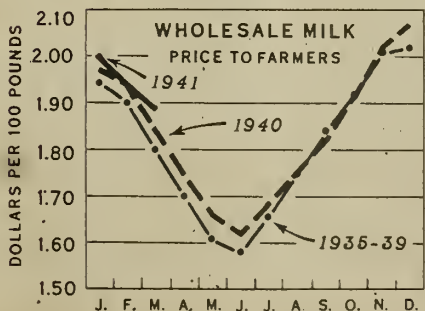
STOCKS



PRICES



PRICE OF MILK



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Dairy Production

April 15, 1941

SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

		Average 1935-39	1940	1941	
				Total or average	Percent of 1940
MILK PRODUCTION ON FARMS					
Total, per month.....mil.lb.	Jan.	7,480	7,952	8,448	106.2
	Feb.	7,124	7,801	8,008 <u>a/</u>	102.7
	Mar.	8,342	9,006	9,331 <u>a/</u>	103.6
Per capita, daily average..... lb.	Feb.	1,957	2,044	2,159 <u>a/</u>	105.6
	Mar.	2,084	2,207	2,271 <u>a/</u>	102.9
Per cow, per day..... lb.	Feb. 1	11.97	12.65	13.46	106.4
(As reported by crop correspondents)	Mar. 1	12.51	13.62	13.77	101.1
	Apr. 1	13.52	14.45	14.84	102.7
GRAIN FED PER COW lb.	Mar. 1	5.37	6.18	6.20 <u>c/</u>	100.3
(As reported by dairy correspondents)	Apr. 1	5.28	6.02	6.10 <u>cd/</u>	101.3
PRODUCTION OF MANUFACTURED DAIRY PRODUCTS					
Creamery butter, monthly.....mil.lb.	Feb.	109.6	127.8	130.8 <u>b/</u>	102.3
	Mar.	124.5	139.0	148.0 <u>a/</u>	106.5
weekly.....week ending	Apr. 3	--	--	--	105.6
	Apr. 10	--	--	--	107.0
American cheese.....mil.lb.	Feb.	27.1	33.1	35.7 <u>b/</u>	107.9
	Mar.	33.0	40.7	44.0 <u>a/</u>	108.1
Evaporated milk, case.....mil.lb.	Jan.	121.7	158.9	171.6	108.0
	Feb.	126.6	170.5	167.0	97.9
4 products, milk equivalent.....mil.lb.	Jan.	3,060	3,477	3,759	108.1
(Creamery butter x 21, all cheese except skim	Feb.	2,965	3,531	3,620	102.5
x 10, canned cond. & evap. milk x 2.2)	Mar.	3,433	3,911	--	107.1 <u>c/</u>
STOCKS ON HAND					
Butter in cold storage.....mil.lb.	Mar. 1	30.2	18.4	16.5	89.7
(Including government holdings)	Apr. 1	22.2	8.9	9.0 <u>a/</u>	101.1
Commercial holdings, only.....	Apr. 1	7.8	7.5	7.2 <u>a/</u>	96.0
American cheese.....mil.lb.	Mar. 1	72.2	67.0	105.2	157.0
(Cold storage holdings)	Apr. 1	65.2	62.0	97.4 <u>a/</u>	157.1
Evaporated milk, case.....mil.lb.	Feb. 1	128.4	156.3	189.2	121.0
(Manufacturers' stocks)	Mar. 1	100.9	150.5	176.6	117.3
5 products, milk equivalent.....mil.lb.	Feb. 1	2,255	1,970	2,374	120.5
(Butter, all cheese, canned cond. & evap.	Mar. 1	1,744	1,604	1,988	123.9
milk plus cream in cold storage)	Apr. 1	1,470	1,372	1,663 <u>cd/</u>	121.2
PRICES					
Butterfat, per pound..... ct.	Feb. 15	32.0	29.7	30.5	102.7
(Prices received by farmers)	Mar. 15	30.1	28.3	30.7	108.5
Butter, wholesale, per pound..... ct.	Mar.	29.99	28.03	30.79	109.8
(92 score, Chicago)	Apr.	28.51	27.10	31.75 <u>e/</u>	117.2
American cheese, wholesale, per pound..... ct.	Mar. 15	13.90	13.50	15.00	111.1
(Twins, Plymouth, Wisconsin)	Apr. 15	13.35	13.00	16.25	125.0
Milk, wholesale, per 100 pounds.....dol.	Feb. 15	1.90	1.94	1.94 <u>b/</u>	100.0
(All purposes, prices received by farmers)	Mar. 15	1.80	1.83	1.89 <u>a/</u>	103.3
Milk for city distribution, per 100 pounds..dol.	Mar.	2.19	2.25	2.26	100.4
(Prices paid by dealers, 3.5% basis)	Apr.	2.17	2.23	2.27	101.8
Milk, retail, delivered, per quart.....ct.	Mar.	11.99	12.38	12.45	100.6
(Average, 25 markets)	Apr.	11.89	12.20	12.47 <u>a/</u>	102.2

a/ Preliminary. b/ Preliminary revision. c/ Forecast or interpolation.
d/ Not available when accompanying chart was prepared. e/ Price April 14.

mjd

Milk production on farms in the United States during March, estimated at 9.3 billion pounds, was nearly 4 percent higher than in the same month of 1940, and represented a continuation of the relatively heavy milk production that has been in evidence for some time. Despite delayed development of early pastures in the South and East, production appears to have been maintained in major dairy areas by liberal feeding of milk cows. In the western part of the country the spring has been early, as it was last year.

Daily production of milk per capita in March this year was the heaviest of any of the dozen or so years for which monthly indications are available. Production figures for March indicate 2.27 pounds of milk per person per day, about 3 percent higher than for the same month last year, and about 9 percent above the 1935-39 average for that time of the year.

MONTHLY MILK PRODUCTION ON FARMS, UNITED STATES
1935-39 Average, 1940, and 1941

Month	Monthly Total			Daily Average per Capita		
	Average			Average		
	1935-39	1940 1/	1941	1935-39	1940 1/	1941
		Million pounds			Pounds	
January	7,480	7,952	8,448 1/	1.871	1.950	2.058 1/
February	7,124	7,801	8,008	1.957	2.044	2.159
March	8,342	9,006	9,331	2.084	2.207	2.271
April	8,928	9,444	-	2.304	2.390	-
May	10,719	11,076	-	2.676	2.712	-
June	11,195	11,805	-	2.886	2.985	-
July	10,443	10,865	-	2.604	2.657	-
August	9,330	9,812	-	2.325	2.398	-
September	8,358	8,880	-	2.145	2.241	-
October	7,992	8,510	-	1.989	2.077	-
November	7,303	7,845	-	1.876	1.977	-
December	7,516	8,076	-	1.868	1.968	-
Yearly Total	104,710	111,072	-	2.216	2.301	-
1/ Revised.						

On April 1 production per cow in herds kept by crop correspondents exceeded previous high April 1 records by 2 percent, and production a year ago by nearly 3 percent. The heavy milk flow was apparent in nearly all parts of the country. In all major groups of States except the South Central, the reported production per cow on April 1 was more than 7 percent above the 10-year average for the date. Record high figures were reported from northern States from Wisconsin westward. The unusually high rate of production in northern States appears to reflect continued feeding of abundant grain supplies on farms together with moderate late-March temperatures from Minnesota westward.

In the South, however, where cool weather delayed early feed from pastures, the rate of increase in milk production during March this year was somewhat less than usual. In central and western Gulf Coast States, April 1 production per cow was below the 10-year average for the date, a condition shared by only two States outside this area. Low production in these States was due in part to the unusually small proportion of the milk cows being milked on April 1.

For the country as a whole April 1 milk production per cow in herds kept by crop correspondents averaged 14.84 pounds compared with 14.45 pounds last year and an average of 13.53 pounds in the period 1930-39. In these herds 70.1 percent of the milk cows were reported in production, slightly less than on April 1 in the last 2 years but otherwise the highest on a record dating back to 1925.

From about 1930 through 1933, as shown by the graph on the front cover, milk production from January through March was higher relative to summer production (July through September) than during either the 1935-39 period or the 1925-29 period. Records of the volume of manufactured dairy products produced show somewhat similar seasonal changes. Such shifts affect the volumes of dairy products which can be profitably stored in summer for winter sale.

Opinions may differ as to the cause of these changes in seasonal production. The 1930-33 period was distinctive in various ways. It was a period when dairymen added more than the usual number of heifers to their milking herds and culled more lightly than usual. It was a period of mild winters, hot summers and poor late summer pastures. During a large part of the period prices were declining so rapidly that most storage operations were unprofitable and prices of dairy products declined rapidly at the beginning of each into-storage period. On the other hand, the high level of winter production relative to summer production persisted in the North Atlantic and North Central States through several seasons that differed markedly in feed supplies and relative prices.

It appears (as a convenient and possibly useful supposition rather than a statement of fact) that seasonal production is being constantly adjusted to changes in prices and costs. Thus, when conditions are favorable for increasing winter production for several years in succession there is a gradual increase in the proportion of the heifers and cows bred to freshen so as to be in heavy production during part or all of the October to April period when prices of dairy products are usually highest. Like other cyclical changes in livestock production such a shift would tend to go too far before it could be reversed to meet the resulting changes in the seasonal trend of prices. This theory (which is based on seasonal shifts in the percentages of the cows reported milked, on records of freshenings on individual farms, and on general observation over a period of 20 years) seems to fit the record of seasonal shifts in the various areas and to explain some otherwise conflicting relations of production per cow to related factors in individual months. Of course, changes in freshening dates do not cause all the shifts between winter and summer production. They require separate consideration chiefly because their effects are more gradual and cumulative.

Looking back, it will be seen that winter milk production was probably particularly low during the World War period when feed was very high in price compared with grain. In 1917, creamery butter production during the first quarter of the year was only a little over 50 percent of production in the third quarter. After the collapse of grain prices in 1920 winter milk production rose, except for a setback after the partial failure of the 1924 corn crop. By 1926, butter production during the first quarter was almost 75 percent of that during the third quarter. This percentage stayed high for several years and then increased to 87 in 1932. The drought years 1934 and 1936, which necessitated sharp curtailment of winter feeding, apparently caused extensive changes. In 1938, even though feed supplies were again abundant, the first to third quarter percentage was 71. In 1939 it was 82 and in 1940, even though pastures were good, it was about 80.

At present there are no signs that any significant changes in seasonal production have recently occurred or are to be expected in the South or the West. The shift towards winter production appears to be strongest in the West North Central States, quite evident in the East North Central and probable, but not definite, in the North Atlantic Region. Current Government buying and export needs, added to the currently heavy domestic demand, are tending to maintain price conditions favorable for heavy feeding and therefore for continued fall freshening and for heavy production next winter. Looking farther ahead, however, it is quite possible that present seasonal trends may be reversed. Much will depend on the extent to which the Nation has to tighten its belt and divert manpower and incomes to defense purposes.

MILK PRODUCED PER MILK COW IN HERDS KEPT BY REPORTERS 1/

State	April 1 :(Avg.) 1930-39:	April 1 1939	April 1 1940	April 1 1941
	Pounds	Pounds	Pounds	Pounds
Me.	13.2	13.4	13.6	13.6
N.H.	15.0	14.6	15.9	13.6
Vt.	14.6	14.9	15.1	15.4
Mass.	17.9	17.3	18.5	19.5
Conn.	17.2	17.6	17.9	17.6
N.Y.	17.3	18.2	19.3	19.3
N.J.	19.3	19.6	19.5	19.6
Pa.	17.1	17.7	17.8	18.1
N. ATL.	16.95	17.76	18.07	18.22
Ohio	15.0	15.4	15.4	15.2
Ind.	13.5	14.5	13.8	14.7
Ill.	14.5	15.9	15.8	16.1
Mich.	17.3	18.6	18.3	18.5
Wis.	17.2	17.8	18.4	19.1
E.N. CENT.	15.87	16.75	17.02	17.43
Minn.	17.4	18.5	18.7	19.6
Iowa	14.6	16.2	15.9	16.8
Mo.	9.3	10.2	9.2	9.9
N. Dak.	12.1	13.8	14.5	15.5
S. Dak.	11.3	12.7	12.5	13.1
Nebr.	13.7	14.8	14.4	14.4
Kans.	14.4	15.5	14.0	15.7
W.N. CENT.	13.57	14.88	14.76	15.33
Md.	13.8	16.4	15.7	15.0
Va.	9.8	10.3	10.5	10.9
W. Va.	9.2	9.3	9.2	8.6
N. C.	10.1	11.1	10.7	10.9
S. C.	9.7	10.1	9.6	9.9
Ga.	8.2	9.1	8.2	8.6
S. ATL.	9.94	11.02	10.22	10.69
Ky.	9.7	10.2	9.8	10.3
Tenn.	8.8	9.8	8.6	9.4
Ala.	7.6	8.7	7.5	8.0
Miss.	7.0	7.5	6.4	6.1
Ark.	7.9	8.6	7.7	8.5
Okla.	10.8	11.7	10.6	10.8
Tex.	9.3	9.6	8.8	9.1
S. CENT.	8.96	9.62	8.74	9.14
Mont.	12.4	14.9	14.6	15.0
Idaho	16.4	16.8	18.7	19.1
Wyo.	11.5	12.7	13.2	13.6
Colo.	13.6	15.1	15.0	16.0
Wash.	16.8	17.6	18.0	18.2
Oreg.	15.8	16.7	17.4	17.6
Calif.	19.8	19.7	21.0	20.2
West.	15.21	16.42	17.53	17.73
U.S.	13.53	14.51	14.45	14.84

1/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds. Figures for New England States are based on combined returns from crop and special dairy reporters and are weighted by counties. Figures for other States, regions, and U.S. are based on returns from crop reporters only. The regional averages are based in part on records of less important dairy States not shown separately, as follows: North Atlantic, Rhode Island; South Atlantic, Delaware and Florida; South Central, Louisiana; Western, New Mexico, Arizona, Utah and Nevada.

MILK PRODUCTION PER COW: YEARLY TRENDS AND VARIATIONS 1925-41

Milk production per milk cow, as reported by crop correspondents on the first of each month, is usually nearly 50 percent higher on June 1 than on the following December 1. As this seasonal variation is due primarily to the large proportion of the cows freshening in the spring and to the normally favorable pasturage and climatic conditions of early summer it is quickly affected by changes in these factors.

Variations in the seasonal curve can best be seen by comparing the reported production per cow with averages for the same dates, as in the graph on the front cover. This graph shows both wave-like changes in the level from year to year and smaller waves within certain groups of years. Thus, in all principal groups of States, production per cow was low in 1925, rose for several years, declined till late 1934 or early 1935 and then rose again, with local dips where drought was severe. Changes in pastures and feeding rates have been the principal factors responsible, as explained last month, but the net result of all factors has been to modify production per cow in such a way that there has been about the usual annual supply of milk per capita. The adjustment, however, has not been immediate or complete. The effects of an abundance or shortage of feed are evident, and the delays in adjusting rates of feeding as requirements changed help to explain some of the variations in milk production per capita. The tendency towards heavy winter production during the 1930-33 period was also quite general (see page 6).

Each year has brought new conditions and new problems. Thus, in reviewing the graph, it will be noted that in the early months of 1925 milk production was unusually low. At that time there was a large supply of butter in storage, but partial failure of the 1924 corn crop had forced heavy marketings of hogs and cattle. By January 1926 the price of corn had dropped from \$1.14 per bushel to 70 cents, the price of butter was up 5 cents a pound and milk production per cow was up 7 percent in the United States and 16 percent in the West North Central States.

In the 1927-29 period big hay crops were harvested, pastures were good and feed supplies were fairly abundant. There was a good demand for dairy products at steady prices. Production per cow rose to an unusually high annual average but milk production per capita was not high because the number of cows was low in comparison with the population. After the farm price of beef cattle reached a peak of 10 cents per pound in 1928 the number of milk cows began to increase rapidly.

In the depression years, from 1930 till early in 1933, the trend of prices was downward and there was little summer demand for products to store. In some areas grain was exceedingly cheap and winter feeding was heavy and wasteful but deficit grain areas were pinched by low prices of dairy products with no reduction in freight rates on purchased feed. With the number of cows increasing rapidly, production per capita was at the peak, winter production being particularly heavy. But even though feed was cheap and there was a surplus of labor on the farms, milk production per cow declined. This decline was due in part to poor pastures, light culling and the addition of a large number of heifers to the herds, but primarily it was due to limited markets and the effects of low prices. At times, the price of butterfat was particularly low compared with the price of cattle.

The year 1934 opened with stocks of butter unusually large and the better grades selling for 20 cents a pound. Then the drought struck -- early in the year. Feed and hay prices soared. Feeding was drastically curtailed. Many cows were slaughtered. Butter rose to 35 cents by February 1935, but dropped abruptly as good summer pastures increased production. In the late fall of 1935, after prices had picked up, feeding increased. In the summer of 1936 milk production was cut short by drought, but prices rose enough to cause heavy feeding and there was an unprecedented fall pickup in production followed by heavy winter production in the Northeast that partially offset the exceedingly low production in the drought area. From the fall of 1937 through the spring of 1941 feed was abundant. Production per cow was relatively high and continued to increase. The proportion of the milk produced during the first quarter of the year also increased. During this period the number of milk cows per capita was moderately low but was increasing.